Remarks

Claims 1-16 are pending in the application.

The drawings are objected to.

Claims 1, 2, 4, 11 and 12 are rejected under 35 U.S.C. §112, ¶2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 5 and 11 are rejected under 35 U.S.C. §102(e) as being anticipated by Partridge et al. (Partridge) U.S. Patent 6,160,811.

Claims 2 and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Partridge in view of Haddock et al. (Haddock) US. Patent 6,104,700.

Claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over Partridge in view of Haddock further in view of Giroux et al. (Giroux) U.S. Patent 6,317,416 B1.

Claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over Partridge.

Each of the various rejections and objections are overcome by amendments that are made to the specification, drawing, and/or claims, as well as, or in the alternative, by various arguments that are presented.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., to just avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, since a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewriting to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

Objection to the Drawing

In the Office Action Summary Sheet, the Examiner indicates that the drawings filed on April 30, 1999 have been objected to, however, the Detailed Action portion of the Office Action does not include any description of the objection. Applicants respectfully request that the Examiner clarify this discrepancy with respect to the objection in the next Office Action.

Rejection Under 35 U.S.C. 112, Second Paragraph

Claims 1, 2, 3, 4, 5-10, 11, 12 and 13-15

Claims 1, 2, 4, 11 and 12 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action states that the word "any" in the phrase "... processes said arrived packet in accordance with any quality of service requirement and flow specifications" of claims 1, 2, and 11 renders these claims indefinite, asserting that it is not clear what the processing is in accordance with. The Office Action states that it is not clear what is meant by the word "propriety" in claims 4 and 12. Furthermore,

claims 3, 5-10 and 13-15 are rejected because they are based on indefinite independent claims. The rejection is traversed.

With respect to claims 1, 2, and 11, Applicants have herein amended claims 1, 2, and 11 such that the word "any" no longer appears in the rejected claims. As such, Applicants submit that the rejection of claims 1, 2, and 11, and associated claims which depend from claims 1, 2, and 11, is moot.

With respect to claims 4 and 12, Applicants respectfully submit that the word "propriety" is clear. With respect to filtering performed by the processing means, Applicants' specification states that the filter engine can determine the propriety of the packet being processed to be routed, based on information, such as one or more of packet to be routed based on one or more of source addresses, destination addresses and other routing parameters. Specifically, with respect to the filter engine, Applicants' specification states:

> "The Filter Engine 115 can use specifications from the network manager or Resource Reservation Protocol (RSVP) to decide the classification of packets. If a packet comes from an unauthorized source, the filter engine 115 drops it. The filter engine 115 can determine if a packet belongs to a flow that must not be assigned a separate queue, e.g., Mail packets or File Transfer Protocol packets may not be assigned to a specific queue. If a Resource Reservation Protocol (RSVP) reservation has been made for a packet, the filter engine 115 can assign it a class and bandwidth. Only RSVP reservations that specify ranges of addresses are specified through a filter. When the packet record is input to the Flow Identification Engine 130 from the Filter Engine, it is assigned to a separate queue and forwarded to the Scheduler 109, which supports a two level scheduling mechanism – based on classes and based on queues. The filter engine 115 could also assign a packet with a specific class and not allow the Flow Identification Engine 130 to assign the packet to a queue. Instead all packets that go through this filter will go to the same queue."
> [Applicants' Specification, Pg. 30, Lines 1-12].

In other words, from at least the cited portion of Applicants' specification, it is clear that "determining propriety of said packet to be routed based on one or more of said source addresses, destination addresses and other routing parameters" is a determination, using one or more of the source and destination addresses and other routing information, as to whether or not the packet should

be routed or how the packet should be routed. As such, Applicants respectfully submit that "propriety" is clear.

As such, claims 1, 2, 3, 4, 5-10, 11, 12 and 13-15 are allowable under 35 U.S.C. §112. Therefore, the rejection should be withdrawn.

Rejection Under 35 U.S.C. 102

Claims 1, 5 and 11

Claims 1, 5 and 11 are rejected under 35 U.S.C. §102(e) as being anticipated by Partridge. The rejection is traversed.

In general, Partridge discloses a router that uses a plurality of forwarding processors and a matrix switch that selectively connects input ports, output ports, and the forwarding processors, where each of the input ports selects a forwarding processor for each incoming data packet in accordance with data in the header of the incoming packet and transmits the packet header to the selected forwarding processor. As disclosed in Partridge, the selected forwarding processor operates to transmit the identity of an outgoing port for the packet to the input port at which the packet was received. (Partridge, Abstract).

Partridge, however, fails to teach or suggest each and every limitation of Applicants' claim 1. Namely, Partridge fails to teach or suggest at least the limitations of "means for processing said corresponding header packet to determine a route for said arrived packet, said processing means assigning packet forwarding information to said header packet" and "means for retrieving said data information from said predetermined memory locations and forwarding said data and header packet containing said packet forwarding information to said interface means for routing said packet to a further destination in accordance with said packet forwarding information," as claimed in Applicants' claim 1.

Rather, Partridge merely teaches that a to-switch unit receives and buffers a packet, that the to-switch unit selects a forwarding engine and abstracts link layer data in the header of the received packet to form a modified header, that the to-switch unit provides the modified header to the selected forwarding engine,

that the forwarding engine determines the output port for the packet, that the forwarding engine sends an output token back to the to-switch unit that sent the packet header, that the to-switch unit sends the entire packet with the header and the output token to the from-switch unit determined by the forwarding engine, and that the from-switch unit generates appropriate output link layer data and reassembles the packet with header and transmits the packet. (Partridge, Col. 5, Lines 19-44).

In other words, although Partridge teaches abstraction of header information to form a modified header that is sent to a selected forwarding engine, the selected forwarding engine does not assign any packet forwarding information to the modified header. Rather, as taught in Partridge, the forwarding engine generates an output token that is separate from the modified header, and sends the output token back to the to-switch unit. Furthermore, the to-switch unit then provides the received packet including the header, plus the output token, to the from-switch unit for transmission of the packet over the selected output port. Specifically, Partridge states that "...the forwarding engine sends an output token back to the TSU which sent the packet header...As indicated at block 111, that to-switch unit then sends the entire packet with the header and the output token to the FSU (from-switch unit) determined by the forwarding engine." (Partridge, Col. 5, Lines 34-40).

By contrast, Applicants' claim 1 states that the means for processing a header packet determines a route for the arrived packet associated with the header packet and, further, assigns packet forwarding information to the header packet. In other words, rather than generating a separate output token that must be processed in addition to the packet and the header packet, the processing means of Applicants' claim 1 adapts the header packet to include packet forwarding information. Furthermore, Applicants' claim 1 includes means for retrieving data information of the arrived packet from memory and forwarding the data information and the adapted header packet including the packet forwarding information to an interface means for routing the packet to a further destination.

Thus, the forwarding of a modified header to a forwarding engine for use in generating an output token to be used in combination with the received packet for which the output token is generated in order to route the received packet, as taught in Partridge, is simply not extracting routing information from a header of an arrived packet, generating a corresponding header packet for the arrived packet, and adapting that header packet to include packet forwarding information for use in routing the packet, as claimed in Applicants' claim 1.

As such, Partridge fails to disclose each and every element of the claimed invention, as arranged in independent claim 1. Therefore claim 1 is allowable over Partridge under 35 U.S.C. §102(e). Claim 11 recites relevant limitations similar to those recited in independent claim 1. Accordingly, for at least the same reasons discussed above, Partridge fails to disclose each and every element of the claimed invention, as arranged in independent claim 11.

As such, claims 1 and 11 are allowable under 35 U.S.C. §102. Furthermore, since all of the dependent claims that depend from the independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over Partridge under 35 U.S.C. §102.

Therefore, claims 1, 5, and 11 are not anticipated by Partridge and are allowable under 35 U.S.C. §102(e). As such, the rejection should be withdrawn.

Rejection Under 35 U.S.C. 103(a)

Claims 2 and 16

Claims 2 and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Partridge in view of Haddock. The rejection is traversed.

Claim 2

This ground of rejection applies only to a dependent claim and is predicated on the validity of the rejection of independent claim 1 under 35 U.S.C. §102 given Partridge. Since the rejection under 35 U.S.C. §102 given Partridge has been overcome, as described hereinabove, and there is no argument put

forth by the Office Action that Haddock supplies that which is missing from Partridge to render independent claim 1 anticipated, this ground of rejection cannot be maintained.

Therefore, claim 2 is allowable under 35 U.S.C. 103(a). As such, the rejection should be withdrawn.

Claim 16

Applicants submit that Partridge and Haddock, alone or in combination, fail to teach or suggest Applicants' invention, as a whole. In particular, for at least the reasons described hereinabove with respect to claim 1, Partridge fails to teach or suggest Applicants' claim 16, as a whole. Namely, Partridge fails to teach or suggest at least the limitations of "a processor for processing the packet record corresponding to the arrived packet and determining a route and resource assignments for the arrived packet, the processor assigning packet forwarding information to the packet record corresponding to the arrived packet" and "means for retrieving the data information of the arrived packet from the predetermined memory locations and assembling an outgoing packet corresponding to the arrived packet from the data information of the arrived packet, the packet record corresponding to the arrived packet, and the packet forwarding information assigned to the packet record corresponding to the arrived packet," as claimed in Applicants' claim 16.

Furthermore, Haddock fails to bridge the substantial gap between Partridge and Applicants' claim 16.

In general, Haddock discloses a policy-based mechanism for managing, monitoring, and prioritizing traffic within a network and allocating bandwidth to achieve quality of service. (Haddock, Abstract).

Haddock, however, alone or in combination with Partridge, fails to teach or suggest Applicants' claim 16, as a whole. Namely, Haddock is devoid of any teaching or suggestion of extracting routing information from a header of an arrived packet and generating a corresponding header packet for the arrived packet. As such, Haddock fails to teach or suggest "means for extracting routing

information from an arrived packet and generating a packet record corresponding to the arrived packet. Thus, Haddock must also fail to teach or suggest at least the limitations of "a processor for processing the packet record corresponding to the arrived packet and determining a route and resource assignments for the arrived packet, the processor assigning packet forwarding information to the packet record corresponding to the arrived packet" and "means for retrieving the data information of the arrived packet from the predetermined memory locations and assembling an outgoing packet corresponding to the arrived packet from the data information of the arrived packet, the packet record corresponding to the arrived packet, and the packet forwarding information assigned to the packet record corresponding to the arrived packet," as claimed in Applicants' claim 16.

Therefore, claim 16 is allowable under 35 U.S.C. §103(a) over Partridge and Haddock. As such, the rejection should be withdrawn.

Claims 3 and 8

Claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over Partridge in view of Haddock further in view of Giroux. The rejection is traversed.

Claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over Partridge. The rejection is traversed.

Each of these grounds of rejection applies only to dependent claims, and each is predicated on the validity of the rejection of independent claim 1 under 35 U.S.C. §102 given Partridge Since the rejection under 35 U.S.C. §102 given Partridge has been overcome, as described hereinabove, and there is no argument put forth by the Office Action that the additional references supply that which is missing from Partridge to render the independent claim 1 anticipated, these grounds of rejection cannot be maintained.

Therefore, claims 3 and 8 are allowable under 35 U.S.C. 103(a). As such, the rejections should be withdrawn.

Secondary References

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to Applicants' disclosure than the primary references cited in the Office Action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this Office Action.

Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 530-9404 so that arrangements may be made to discuss and resolve any such issues.

Respectfully submitted,

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